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THE GENESEE FARMER.

SATURDAY, JULY 14, 1838.

Relative value of Manures.

Since the great truth in agriculture, that manure forms the basis of all successful farming, has been more fully developed and better understood, the attention of agriculturists in foreign countries and in this, has been directed to the discovery of the most efficient articles for this purpose, and the best methods of applying them. So convinced have scientific, as well as practical men, on this point, become, that on their representations, the government of several European countries have ordered extensive investigations to be made, and experiments carefully instituted, to determine several questions relating to manures, upon which farmers and experimentalists were not entirely agreed.

The Prussian government, which, in every thing relating to the welfare of the people, in giving them every advantage of education, and the benefit of every improvement in agriculture, has evidently taken the lead, and in conjunction with the Saxon authorities, appointed Professor Hembstadt, of Berlin, to superintend a series of experiments, and publish the results for the use of the public. The effect which the application of night soil and urine had produced on the agriculture of Flanders, where they had been most extensively used, induced the governments of Berlin and Dresden to place under the directions of the Professor, the contents of the city drains and cesspools, for the purpose of attempting the recovery of the barren and light soils in the neighborhood of those cities. Thus countenanced, that eminent agriculturist, in conjunction with other learned men and practical farmers, commenced a series of experiments, which were carried on for a number of years, and varied in every possible way, in order to avoid all sources of fallacy. The results of these experiments have been published by Hembstadt, and have led to extensive and successful agricultural improvements.

Professor Schubler, the writer of the most esteemed, and certainly the most able, Treatise on Agronomia, or the best method of knowing and treating every species of land, since the death of Hembstadt, has repeated and added to the experiments of that professor, obtaining the like results in almost every instance. These he has published in a tabular form, which have since passed into the hands of all the large practical farmers of Germany, and have formed the basis of instruction on manuring, in the hands of professors of agriculture, whom many of the continental governments have with great advantage established in institutions purposely formed to disseminate useful and practical truths in the art of farming. From these tables Dr. Granville, in his report to the Thames Improvement Company, in speaking of the immense source of agricultural wealth which the sewers of London afford, but which is now worse than lost, makes the following statement of facts furnished by them.

If a given quantity of land sown, and without manure, yields three times the seed employed; then the same quantity of land will produce—

5 times the quantity sown, when manured with old herbage, putrid grass or leaves, garden stuff, &c.
7 times when manured with cow dung,
9 times with pigeon's dung,
10 times with horse dung,
12 times with urine,
12 times with goat's dung,
12 times with sheep's dung, and
14 times with night soil, or bullock's blood. Or in other words, an acre of land sown with two bushels of wheat, without manure, will produce—

6 bushels,
10 " with vegetable manures,
14 " with cow dung,
18 " with pigeon's dung,
20 " with horse dung,
24 " with goat's dung,
24 " with urine,
24 " with sheep's dung, and
28 " with night soil, or bullock's blood.

But if the land be of such quality as to produce, without manure, 5 times the sown quantity, then the horse dung will yield 14, and night soil 19½ the sown quantity; or land that will yield without manure 10 bushels an acre, manured with horse dung will produce 28, and with night soil about 39 bushels of wheat per acre.

These results, and multitudes of recorded experiments prove that they in no case vary far from the facts, show the immense superiority of night soil, or Flemish manure, over any hitherto employed. In addition, Dr. Granville found that some crops which yield large profits, and are so extensively cultivated in both Flanders, can only be obtained in abundance, and of the finest quality, by employing what may emphatically be termed Flemish manure in the preparation of the soil.

Another important matter in the comparative value of manures, and of essential practical interest to the farmer, has been established by the same authoritive investigations; and that is, that while night soil has produced fourteen times the quantity sown, where horse dung has yielded only ten—the proportion of the former, or Flemish manure, was, to the horse dung employed, only as 1 to 5; so that with one ton of the Flemish, a larger produce was obtained than with five tons of the best stable manure.

Dr. Granville has drawn some valuable inferences from these truths.

"In England a ton of good stable manure sells for five shillings. Now an acre of arable land in an ordinary state of cultivation in England, is manured with 20 tons of horse or stable manure every 4th year, according to Professor Coventry, and consequently entails an expenditure of £5 in that year. It then produces ten times the quantity of wheat sown. But an acre of the same land similarly sown, and manured with Flemish manure, would require only four tons of it, and which, at the price we have fixed for it, (12 shillings a ton,) would be an expense of £2 8*s*. It would then produce fourteen times the quantity of wheat sown on the acre. Supposing the produce of the acre manured with horse manure to be 5 quarters of wheat, and to sell for £15, that of the acre manured with Flemish manure, will be seven quarters, and sell for £21. The result of this comparative farming operation, therefore, would be:

1st, a saving in manure of £2 12*s*. per acre,
2d, a surplus produce of 6 00 per acre in money.

Total in favor of night soil, £8 12*s*. per acre.

"Dr. Granville states, that he was assured by Mr. Smet, a great farmer in East Flanders, that a measure of wheat land corresponding to an English acre, manured with Flemish manure, produced last year 7½ sacks of wheat of the best quality. The sack contains four measures, each weighing 180 pounds of 16 oz. each; consequently there grew upon the acre 5,400 pounds of wheat, or 90 bushels."

The heaviest crop of wheat we have ever known produced in this country, was the one for which Mr. Blackmore, of this county, received the premium, 64 bushels per acre. The capabilities of the soil, therefore, when put in the best condition, is little understood, or the amount of food an acre can produce, not generally known. The *science* of agriculture is yet in its infancy, however venerable and ancient the *practice* may be; and perhaps in no branch of it is our knowledge more defective than in that relating to manures.

Query, No. 6.—Ripening of Grain.

"Is it certain, that if corn, or any other sort of grain, be severed from their roots while short of maturity, any valuable accessions will afterwards be made to the grain? It is said of unripe corn, that the ripening process will go on after the plant is cut up by the roots. So too of wheat, that it will come to perfection, although cut several days before it has arrived at maturity. This, I think, I have witnessed. Some years since, I had occasion to open a way to a meadow which I wished to enter, and I cut a small strip of wheat while so green as to be supposed of no value except for fodder. This was spread on grass, and after a few days, I was surprised to find the berry was good, and but little inferior to that which stood till it was fully ripe. Now, did these wheat kernels, after the cutting, really receive accessions? or was the alteration caused only by drying and consolidating? If they received accessions, whence came they? from sap ascending from the stems and leaves below, or from the atmosphere. Is it likely that sap *moves* at all in plants after they have been cut and become wilted? A FARMER."

It will be perceived, that this query of our correspondent involves points of great interest to the farmer. Properly decided, it would determine the propriety of cutting up corn by the bottoms, and the best time for harvesting wheat, two questions of vital importance to the cultivator. For ourselves, we think that the process of vegetable nutrition is but very imperfectly or scarcely at all understood; and that the cause of the circulation of the sap, and the conversion of that substance into the farina or starch that gives the principal value to grain, as well as the respective action of the earth and the air in effecting these changes, require much investigation before positive answers to the several parts of this query can be safely given. Experience has, however, done something towards an understanding of these topics, and it is to that test, in the present state of our knowledge, we must principally refer.

We think that experience has plainly decided, that accessions are made to the corn after the stalks are cut at the bottom; and that to nearly or quite as great a degree as if left standing on the hill; and more than if, as was formerly the custom, corn was topped when first beginning to glaze, or early in the season. That corn receives accessions from the stalk after it is cut up, is proved by the fact, that an ear severed from the stalk at the period of glazing, will be very imperfect and the grain inferior, a result not observed when the ear is left on the stalk, though the stalk be severed from the roots. After the formation of the ear has commenced, the berry or the kernel is the point to which all the efforts of nature are directed; and this is continued until the process is complete,—the juices desiccated and rendered incapable of absorption,—or the supply of nutritive matter exhausted. As the juices become thicker in consequence of the non-supply of sap from the root in the plant, the deposition becomes more active and rapid in the grain, so long as it moves at all, or till the kernel is filled; which will in part account for the fact, that grain severed from the root, after the proper supply of nutriment for the kernel has been elaborated in the stalk, ripens so much quicker than it would if left attached to the root.

In the case of the wheat mentioned by our correspondent, it is clear the supply of nutritive matter destined for the berry had all been elaborated, and the only material difference in the process of ripening was, that the matter not receiving supplies of sap from the root, was more quickly deposited than it would have been if subject to that dilution; or, in other words, it ripened so much the earlier. A somewhat similar case occurred to ourselves a few years since. To get to a meadow conveniently, it was necessary to cradle a swath or two through an oat field. The oats were very heavy, but quite green, so much so, that a second growth sprung up from the severed stalks. They were left in the swath until partially hayed, when to clear the ground, they were bound in very small bundles, and set up in a clear place where the air could have free access. Contrary to our

expectation, they saved well, and exhibited a finer berry than many of the frost-bitten oats of two or three years past could do, though very far inferior to those that ripened in the field. In this instance, the substance for perfecting the kernel had not been elaborated in sufficient quantity, hence they were necessarily imperfect. A few days since a farmer assured us, that last year in mowing one of his meadows, in order to cut the whole of a patch of Canada thistles, he found it necessary to mow a small quantity of wheat that adjoined the grass. As the wheat was only fully in the milk, he concluded it would be of no value and raked it with the hay, where it was dried and cured. On examining some of the heads this winter, to his surprise he found the berry bright and plump, apparently as much so, as that which ripened in the field. These instances, we think, prove that accessions are made to grain after it is severed from the roots. Drying and consolidation alone, if no farinaceous matter was added, would only shrivel the grain; it could not cause it to remain filled and plump.

As the proper period of harvesting wheat is an object of much importance to the farmer, since the least injury or the least benefit per bushel, amounts to an immense quantity in the aggregate, we shall give the opinion and practice of some of the most eminent British agriculturists in the matter, as such extracts may assist in forming correct conclusions.

In the second vol. of British Husbandry, page 136-7, it is said,—

"The question has been for some time agitated, regarding the state of ripeness in which grain should be reaped; and it has been recommended as a general rule of practice, to cut down the crops before the uppermost grain can be shaken out. * * * Taking these things into consideration, it seems the most prudent plan to have the grain cut before it is fully ripe: but in this a medium course should be adopted; for although grain if allowed to become too ripe, assumes a dull, dusky hue in the sample; yet, if not ripened enough, it shrivels in the drying."

Loudon asserts—"That in harvesting wheat, the best farmers, both in Britain and the continent, agree, that it ought to be cut before it becomes dead ripe. When this is the case, the loss is considerable, both in the field and in the stack-yard; and the grain, according to Von Thaer, produces an inferior flour."

Cadet de Vaux remarks—"That corn (grain) reaped eight days before the usual time, has the grain fuller, larger, finer, and better calculated to resist the attacks of the weevil. An equal quantity of the corn thus reaped, with corn reaped at maturity, gave more bread, and of a better quality. The proper time for reaping, is that when the grain, on being pressed between the fingers, has a doughy appearance, like the crumb of bread just hot from the oven."

In the 'Reports of Select Farms,' in the report from the Scoresby farm, worked by Mr. C. Howard, it is said:

"Wheat ought never to be allowed to remain uncut until it is fully ripe. Experiments, easily made, will prove to every cultivator of it, that by permitting it to stand until the straw has lost its succulency, he gains nothing in plumpness or bulk of grain, but loses much in color and fineness of skin; besides which, he incurs the risk of shelling by a high wind, or by its being cut under the influence of a burning sun. When fully ripened by standing in the stook, no dry hour should be lost in getting it well secured."

Such extracts might be multiplied, but it is unnecessary. The observation of every farmer, must convince him of the superiority in appearance of color and quality of early cut grain, over that which is dead ripe. One is clear and white skinned, the other dull and dusty, and the effect on the flour is very perceptible. We all remember the time when the Baltimore flour was considered superior to the northern; and a writer in the Baltimore Farmer assigned as a reason for this inferiority in the flour produced north of Pennsylvania, the practice of allowing the wheat to stand dead ripe in the fields, until the berry was discolored. Now the tables are turned, not only as regards the quality of our wheat, but our flour also.

If the remarks which have been made, and the extracts given, cannot be deemed entirely conclusive, as to the fact that corn or grain does receive accessions after they are severed from the roots, they must, we think, be satisfactory in showing that the practice of cutting corn and grain early is well founded, and when a proper medium is observed, cannot be injurious. We, however, consider the question, in some respects, as open for further experiment; and if our correspondent, than whom, no one is more capable, will institute a series, we should be most gratified in laying the results before our readers.

Opinions of the Ancients on Agriculture.

Moderns are in the habit of speaking very disrespectfully of the ancient methods of tilling the earth; and it must be confessed, that in many respects those modes were far inferior to modern ones. This inferiority must, in a great measure, however, be attributed to the defective nature of farming implements, and not to the prevalence of correct theoretical notions of most subjects of practical agriculture; and moderns need not be ashamed to gather wisdom from the works dedicated to the cultivation of the soil by Cato, Varro and Columella, some of whom lived 200 years before Christ. Incidental notices scattered through the Bible by the writers of both Testaments, throw much light on the farming practices of the ancients, and show that in some instances at least, they had crops rarely equalled in modern times. Isaac gathered a hundred fold from his sowing at Gerar; and according to the parable in Mark, good seed sown on good ground produced thirty, sixty, or an hundred fold. Varro asserts, that a hundred fold was reaped in some of the most fertile districts of Spain and Northern Africa, and Pliny says, that from the latter place Augustus received a plant with nearly 400 stalks, all from a single grain.

The maxims relating to domestic economy and farm management, scattered through the writings of the men mentioned above, are such as are rarely exceeded in justness by any writer of the present day. "Always be sticking in a tree when ye have nothing else to do; it will be growing when ye are sleeping"—was the dying advice of the Highland laird to his son; and in Italy, where the oxen and horses for a large part of the year were fed with leaves and fruit, the planting of trees, such as the vine, fig and olive, was a still more important matter. "Men should plant in their youth, and not build till their fields are planted;" is the direction of Pliny.—"Build in such a manner that your villa (or farm establishment) may not be too small for your farm; nor your farm too small for your villa;" is the direction of Cato; and Palladius says, "the largeness of the house should be so estimated, that if any thing shall happen to destroy it, it may be rebuilt by one, or at most by two years rent or profits of the farm on which it is placed."

There are many moderns who would do well to profit by these hints in relation to building. Too many of our farmers forget the continual expense incurred by too extensive or unnecessary buildings, and deserve to feel the point of Cato's remark, that Lucullus had rendered himself liable to the chastisement of the censors, by building so largely "that fewer hands were required to plough his lands than sweep his house."

Oxen were mostly used in the husbandry of the ancients, though asses and mules were not uncommon.—Horses were rarely employed in the labors of the field, their services being required for the army or the pleasures of the rich. It appears from Columella, that oxen when laboring had care taken of them, which should shame the abusers of this valuable animal in modern times. "It is thought proper, that oxen in ploughing, should be allowed to stop a little at the turning, and when they are stopped, the ploughman should put their yoke a little forward, that their necks may cool." He also gives directions about rubbing them down, cooling their necks, lifting the skin where pressed by the yoke or harness, feeding and watering after labor, which shows that the use and value of the ox, as well as the best mode of treatment, was then well understood and practiced.

Among the ancients, ploughing was considered the most important operation of agriculture. "What," says Cato, "is the best culture of land? Good ploughing.—What the next best? Ploughing in the ordinary way.—What is the third? Laying on manure." The most deficient point in ancient agriculture, was that relating to manures; it neither seems to have been properly understood or valued.

The following remarks of Columella, might with propriety stand as introductory to the best modern works on systematic agriculture:

"Whoever would be perfect in this science, (agriculture,) must be well acquainted with the qualities of soils and plants; must not be ignorant of the various climates, that he may know what is agreeable and what is repugnant to each; he must know exactly the succession of the seasons, and the nature of each, lest, beginning his work with wind and showers just at hand, his labor shall be lost. He must be capable to observe exactly the present temper of the sky and seasons; for these are not always regular, nor in every year does the summer and winter bring the same kind of weather, nor is the spring always rainy and the autumn wet. To know these things before they happen, without a very good capacity, and the greatest care to acquire knowledge, is, in my opinion, in the power of no man."

THE SWALLOW.

Of all the birds that appear to seek the society and protection of man, there are few so perfectly inoffensive, or that so amply repay the little care or protection they require, as the swallow. While most other birds are guilty of some piccadillos,—though they are often accused most unjustly,—the swallow gathers unblamed the myriads of flies that abound in the air, tormenting both man and beast. The martin will indeed sometimes take a stray drone instead of an ox fly, but little damage is done by the exchange.

We have now in the settled parts of our country no less than six varieties of swallows, and from the Rev. Mr. Parker's Journal, it appears they have at least one variety west of the Rocky Mountains, that is unknown to us. The most common of our domesticated varieties, is the Barn Swallow, (*Hirundo rufa*) that builds in our barns, and skims over our meadows and rivers. The next most common kind is the Chimney swallow (*Hirundo pelagia.*) In new countries this bird builds its nest in the broken trunks of hollow trees, but prefers the chimney of our dwellings for a residence, as less liable to disturbance. Some one of our correspondents has asked, "what has become of the Martin bird?" (*Hirundo purpurea.*) We do not know, but we should be very sorry to part with this annual visitant from more genial climes, although if any one of the swallow tribe were to leave us, the Martin would perhaps be the least missed. One thing is certain that for one or two years past they have become very infrequent, and their morning twitterings, and high noonday circlings, are not noticed as often as formerly. Perhaps the low temperature of our summers, and the early approach of winter for a year or two past, has been interpreted by them into a warning not to extend their migrations so far from the equinoctial.

But if we have lost the martin in part, we have gained a new swallow, new at least to most parts of our country, in the *Hirundo fulva*, or cliff swallow as it has been sometimes termed. It is but a few years since this little voyageur came among us, and has been received with a universal welcome. It is readily known from all other swallows by the white stripe across the forepart of the head, the peculiar nature of its call, the curious or retort shape of its nest, its building in clusters, and, what perhaps will be the most obvious distinction, its square tail. In this respect it differs from any other swallow.

The white bellied swallow (*Hirundo viridis*) has by some been confounded with the above, but their appearance and habits are very distinct. The *viridis* has the under part of the body a pure white, the tail is slightly forked, and its nest is very different in form and construction. This swallow we have frequently seen construct its nest in holes made by wood peckers in decayed trees, and this, so far as we have observed, is its favorite location.

The bank swallow in its habits, more nearly resembles the *fulva* than any other of the varieties among us, but the appearance of the nest, the forked tail, and the note, and general appearance of the bird mark it as a distinct kind. The bank swallow colonizes the coasts of our rivers and lakes, perforating the high bluffs and banks, and where the nests are in great numbers giving a singular as-

pect to these places. The cliff swallow builds with mortar under the projecting cliffs of rocks, or since it has become domesticated—if we may use the word—it selects the eaves of barns as its usual building place. When we reflect on the immense number of flies—and these are their sole food—that a colony of swallows will destroy in a season, we are disposed to hail every acquisition of this kind as a public good, and request that these migratory visitants may be treated accordingly.

Agriculture---'Knickerbocker'---Economy.

The time has arrived when men of science and taste, of refined minds and the best education, begin to perceive in agriculture and its kindred pursuits much to attract, and much to benefit mankind. It is not viewed as any thing repulsive and forbidding, as fit only for the boor and the clodhopper, but the pursuit of agriculture is one which now engages the attention of the chemist and the scholar, the man who brings to the extension of knowledge the labor of his hands or the labor of the mind. Our best periodicals are not ashamed to devote articles now and then to the improvement of agriculture; and elevated Quarterlies that would once have deemed it an infraction of dignity to have had their 'talk of oxen,' now discourse most learnedly of sheep, cattle, and turneps; and if a little superficial on such matters sometimes, such chapters are probably quite as edifying and beneficial to the public, as details of the petty quarrels of authors, or the dissection of some miserable hack of a writer. The Edinburgh Review was the first, we believe, to set the example of papers on agriculture, and they were distinguished with the usual ability of articles in that Journal; an example which has been more or less followed by other professedly literary periodicals, both abroad and at home.

That first of American Magazines, the 'Knickerbocker' for June, has a paper on the state of Society in this country, particularly as it exists among the agricultural and mechanic classes, which contains much wholesome truth, and may be read to advantage by all interested in these or similar pursuits. Speaking of the different kinds of poverty, and the causes, the writer remarks,—

"By *fashionable and expensive poor*, is intended all those, whether merchants, farmers, mechanics, day laborers, ect., who live in the imitation of expensive fashions, without any proper regard to their wages or fortunes. This class, in the United States, embraces a larger proportion of the people, than in any other country whatever.

"Of these fashionable poor, a large number, even of those that belong to the higher classes, are among the poorest people in the United States. If there were weights and scales to weigh human misery by the ounce and pound, it would be found that these unhappy people suffer more in mind from embarrassments, duns, mortification, offended pride and conscious meanness and wickedness, at the thought that they are spending the property of their friends, and of honest hardworking farmers, mechanics, and others, than many very poor people do in body, for the want of sufficient clothing, fuel, and food. Striving to be something which their means will not allow, they are in a perpetual conflict, in the worst war in the world,—a war with themselves. They do not live by any rule of their own, according to what God has given them, and what is therefore only allowable for them to spend, but they live after a rule set by the fashion of rich people, and thus they see with other people's eyes, whose eyes are their ruin. Instead of having their clothes made in the most economical way, in their own houses by their own wives, or daughters, they run to the fashionable milliners or tailors, at the same time they are suffering for good, substantial, seasonable garments. Their parlors and dining rooms, are full of what they call splendor, that is, finery. If they have valuable pictures, it is ten to one these are put into the shade, in order to show their fine curtains to better advantage. If you go out of this region of splendor and magnificence, the real barrenness of the territory in good, useful things, appears. In the kitchen and other apartments, there is not a decent sufficiency of proper cooking utensils, tubs, kettles, dishes, carpets, and other conveniences for health, comfort, and cleanliness. *Nothing is so mean as the real poverty of these people, except their pride.*"

That this is not a 'true bill,' no one who is acquainted with the state of society in this country, will dare to affirm; and if farmers are more exempt from this species of folly than some other classes, there is great reason to apprehend they are not altogether free. Do not they as well as others, indulge in expensive luxuries simply because they are fashionable, not because they are adapted to their wants?—Do not some of us forget while purchasing fashionable, but to us useless and unprofitable articles, that we are not out of debt; and that while that is the case, we have *no right* to apply money that in reality belongs to others, to the upholding or fostering a ridiculous pride and vanity? That man is not honest, who consults the gratification of his own personal wishes, or taste, before he is just; and the man who holds the proud title of an American farmer, should be the last to ape the follies and vices of others, be they fashionable or otherwise.

The Geological Reports.

There was not room in our last paper, for all the valuable extracts which we intended to make from the Report on the Fourth Geological District.

"Clays might be used to manifest advantage, on some of the sandy soils, particularly in the eastern part of Monroe county, where the same farm often contains both sand and clay."

"The decomposing gypseous marls appear at the surface in Pittsford, and other places, where they have been mistaken for clay. This marl contains too much carbonate of lime to be useful for bricks, but would be valuable if used as a manure on sandy lands."

"At the outlet of the Irondequoit bay, great quantities of a pure siliceous sand is drifted into ridges along the shore. Sand may be obtained from this place, in sufficient quantities for the manufacture of glass."

"Magnetic iron sand and garnet sand, are also found in considerable quantities, and collected for writing sand. These two sands result from the destruction of granite rocks containing both iron and garnet."

"The water all flows into wells from the north, as we would expect from the dip of the strata; and in some cases, a well dug to the south of one already supplying water, will drain the latter entirely. In such cases, it is only necessary to excavate the northern well deeper to obtain a supply."

"Rain water has the property of dissolving the calcareous rocks over which it flows, but the water of many springs dissolve much more. This property is owing to the presence of carbonic acid gas in the water; when the acid is dissipated in the atmosphere, the calcareous matter before held in solution, is thrown down. The loose porous portions of this deposit, usually containing incrusted plants, leaves, and other substances, is called *tufa;* the more compact parts are called *Travertin.*"

"Deposits of shell marl are found in various places in Monroe county. The most important locality is in the southern part of the county, along the course of Allen's creek in Wheatland. Tufa forms the upper portion of this deposit, in many places to the depth of three or four feet, and below it is the shell marl three or four feet thick. Some portions of the formation are nearly pure carbonate of lime, containing abundance of shells: in other places it is impure from the admixture of earthy matter. It extends in length about three miles, and in breadth from half a mile to one mile. The general thickness is about five feet, though often much greater. At its smallest dimensions we shall find it 125,452,800 cubic feet, or 2,309,056 loads.

"Another extensive deposit of this material is found along the course of Mill creek, extending from its source to Cady pond, and filling the marshes around the pond for the extent of many acres. Its thickness is unknown, but in some places it exceeds three or four feet. In low grounds here where ditches have been dug, I observed the marl lying on the surface as it was thrown out. *The farmers generally do not appear to be aware of its importance.* The soil above these deposits is usually a light, partially decomposed vegetable matter, allowing the water to pass through it, by which means it soon becomes parched, and the crops perish. By spreading on this soil a quantity of clay or loam and the marl beneath it, it could be made of the finest quality.

"In the town of Riga, on the land of Mr. Knowles, a deposit of this marl of *unknown depth*, covers thirty or forty acres. It has been penetrated ten or fifteen feet without finding its termination. The upper portions are very pure carbonate of lime, yielding lime of a very superior quality. It is cut out while moist in masses of the form and size of bricks, laid in the kiln and burned. By accident several loads of this marl were deposited and remained for several years on *a barren piece of ground;* afterwards this spot was ploughed, and *has yielded large crops every year since*, though before it produced almost nothing. *Strange as it may seem*, this change in the character of the soil *was not attributed to the marl*, consequently it has not been used on other parts of the farm."

"The iron in the rock is probably the substance which acts as the stimulant, though there may be other ingredients which produce the same effect. I have not seen it used extensively on any crop, but *where thrown upon the surface from excavations, the natural vegetation is always much more thrifty.*

"Bog ore may be applied as a manure in many places. I do not know that it has yet been used, except where a bed of it has been so near the surface that the plough has scattered it. In these cases *it is found that the crop is much more thrifty in that part of the field.*"

"The manner in which plaster affects vegetation appears generally not to be understood; but it is doubtless by attracting moisture, and with it carbonic acid from the atmosphere, and thus furnishing nourishment to the plant. Experiments prove that the perceptible effect at least, of plaster, is the absorption of moisture from the atmosphere."

We do not controvert these premises, except to ask for the proofs. It may be, or it may not be, so.

"At present about 5000 tons of plaster per annum are obtained from the town of Wheatland; and of this quantity 4000 tons are used in Monroe county. This however is not the whole amount used in the county, as much plaster is brought from the counties further east."

"East of Rochester lime is made from boulders and fragments of limestone on the surface and embedded in the soil. *This limestone contains magnesian earth*, and some other impurities, rendering the lime less valuable than otherwise it would be"——a matter well worthy of the consideration of those who purchase it.

On the subject of *hydraulic cement*, we find the following excellent remarks:

"A cement required to withstand the action of freezing water, should contain little argillaceous matter. Clay in any form, absorbs water abundantly; and if frozen while containing water, the cohesion of the particles is destroyed. By this process, every time it is frozen, a portion of the surface at least is removed, and finally the whole mass.

"A siliceous limestone with a little iron or manganese in its composition, appears best adapted for hydraulic cement. Limestone of this character can be found at intervals in either of the formations mentioned; but *experience is necessary to choose the proper portions*, and some localities afford an article far superior to others.——That furnished for the aqueduct at Medina occurs at Shelby, two miles south of Medina. *The cement in this aqueduct, has remained more firm than any I have seen on the Canal.*"

"The subject of cements for the public works of New-York, is one of great importance. The substance used for that purpose is in many cases, entirely unfit, and from this cause alone much loss is sustained. I do not hesitate to say that the substance called *hydraulic cement*, in many cases where used, is *far inferior to common mortar* made with good quick lime. It is to be hoped that some attention will be given to this subject, in the construction of the new locks and aqueducts on the Erie Canal."

"We have not seen any bird-tracks, or other impressions of animals [on the Rocks] in the Fourth Geological District."

"Tufa is found in small quantities in many places, particularly along the north slope of the mountain ridge, [in Niagara county.]

"Shell marl is found in swamps between the mountain and the lake ridges. An extensive deposit of this substance occurs in a swamp five miles east of Lockport. It has been used at this place as a substitute for lime, but not as a manure. Several other swamps of similar character occur on the south side of the Ridge Road."

"Bog ore can be obtained on almost every farm north of the ridge, and would be of great advantage if pulverized and spread over the surface."

"The argillaceous iron ore of Wayne and Monroe counties, is not any where found in Niagara."

"The importance of proper materials for construction is overlooked both in private and public works. From data obtained on this subject, *I have ascertained that the state of New-York has sustained a loss of at least one million of dollars, from the use of improper materials* for construction on the Erie Canal since its commencement; and thousands of dollars annually would be saved by employing some experienced person to select stones and cements for use on the Canal."

We think the Geologist has satisfactorily shown that there is no possibility of a great deluge occurring from the sudden drainage of Lake Erie,—an event which has been contemplated by some scientific men; and we would encourage our friends along its shores to erect their wharves, &c. without any fear of disappointment from even a subsiding of the waters for remote ages yet to come.

In those parts of the First Geological District which were examined last season, about two thousand specimens have been collected for the State, and arranged in the Geological Rooms. Specimens have also been collected in the Second District; thirteen boxes in the Third District; and more than thirty boxes in the Fourth

cal District. These must constitute a rich treat for intelligent travelers.

In conclusion we would add, that our Notices have been too brief to do justice to these able Reports, but we have done what our time and space seemed to allow. We have written in haste, perusing each Report separately at the time we wrote, and in most instances not having become acquainted with the succeeding pages of the volume. Governor Marcy says,—and we are quite disposed to adopt his opinion,—"that the work is progressing with rapidity; that those employed by the State are executing it with scientific skill and persevering industry; and that the results of their labors in developing our internal resources, and adding to the wealth of the state, will be quite equal to the high expectations which have been formed of the usefulness of this public enterprise." T.

Meteorology---May---June.

May. Average temperature at 9 o'clock 48°, at 2 o'clock, 57°. Lowest temperature on the 1st, 31°. Highest on the 21st, 83°. Range for the month 62°. No. of clear days 9. Cloudy days 15. Variable 7. Snow on four days. Rain on twelve. The quantity of snow that fell during the month, was greater than recorded in any former year. The remarkable fall of snow on the 25th extended over a large part of the northern and middle states. In Bradford County, Pennsylvania, the snow was 10 inches deep; and considerable quantities fell at Pittsburg and Wheeling. The Allegany ranges were white for several days, and on the elevated lands of Western New-York we saw the snow had not all disappeared on the 27th. There was severe frost on the Mississippi at Vicksburg and Natchez on the night ot the 24th.

June. Agerage temperature at 9 o'clock 65°. At 2 o'clock 77°. Lowest temperature on the 2d, 48°. Highest, 23d, 90°. Range for the month 42°. No. of clear days 18, variable 6, Rain 10 days. A comparison with former tables will show that the average temperature of June has been greater than that for a number of years previous, and the great luxuriance of vegetation proves the favorable influence of this cause. W. G.

Otisco, July 5, 1838.

Brining not the Cause of the Failure of Italian Wheat.

We have before expressed an opinion that the cause of the failure of spring wheat, particularly the Italian, to vegetate, was more owing to the peculiarities of the season, than to brining, as suggested by Mr. Hathaway, and further inquiry has convinced us that our supposition was in the main correct. E. Pelton, Esq. of Onondaga County, has furnished us a statement of his sowing this spring, which would seem to be decisive, as to the question of injury from brining. His land for sowing spring wheat was made ready in March, and his seed wheat (common spring wheat) was put into brine strong enough to float an egg, skimmed, and allowed to remain in the liquor three days. As the heavy rains forbid his sowing the wheat, it was taken from the brine, drained in baskets, and then put on the floor of an outhouse where it remained damp for several days, and was not finally sown until a month after the first soaking, when it was again wet, limed, and sown, and now looks finely.

His Italian wheat, of which he sowed a number of bushels, lay in a similar brine forty-eight hours, was then dried in lime, and sown, and apparently has scarce a kernel of it failed, as it now looks beautifully, and promises a good crop.

Mr. P. also sowed some of the common spring wheat in another field, which was like the first kept in brine of strength equal to the first for three days, was then limed and immediately sown. None of it failed to vegetate. It will be seen that none of Mr. Pelton's wheat was in the ground during the extremely cold wet weather of the month of April, and none of his failed though brined far beyond the limit stated by Mr. Hathaway. We have, however, heard of many instances, in which wheat sown [illegible] the time Mr. P. entered on the preparation of his, failed entirely, a result we imagine safely to be attributed to the unprecedented backwardness and coldness of April and May.

ITALIAN WHEAT.

We have just received a note from Mr. Peirce of Philadelphia, accompanied by a number of the Daily Focus of that city, requesting our notice of a communication in that paper from Mr. Bristol of Oneida County, relating to the comparative merits of the Italian and Siberian spring wheats.

Owing to the delay which has taken place in the reception of the note and paper, (a delay to us unaccountable,) the season has past in which a notice might have been useful, and the publication of Mr. B's. letter will be omitted, at least for the present. The reputation of the Italian spring wheat is too firmly established in this part of the United States to need any defence; and if our correspondent could see the beautiful fields of this wheat, as well as the Siberian and common varieties, that promise a most abundant harvest, he would have little fear that this valuable grain will be 'underrated by the million.'

Opinions Abroad on American Agriculture.

In the first volume of the national work called 'British Husbandry,' at page 322, under the article Gypsum, and on the effects said to be produced in the United States by the use of the article, the writer says:

"Mr. Parkinson, too, who resided a considerable time in the United States, and has written upon its farming, denies its effects, except upon particular crops; and as to the dung, in competition with which it was used, he says that the farm-yard manure in that country is of little value; for it is ill managed, the straw weak, and the generality of the horned cattle so poor that their dung is light and worthless: to which he adds, that the common American farm carts contain no more than a large wheelbarrow."

Good!—and if he had only added, as he might when his hand was in, that it took three American cows to make a shadow, so thin are they; and that the young Jonathans lived on bean broth, so weak that the ten commandments might be read in the bowl at the depth of twenty feet, he would have established his fame as a second Munchausen, and gained an enviable rank among the cockney tourists of the present day.

Importation of Sheep.

We are pleased to learn that THOMAS WEDDLE, Esq. of East Bloomfield, has just received from one of the best and most extensive breeders in England, four bucks and four ewes of the New or Improved Leicestershire sheep. Though but yearlings, their fleeces weighed from ten to sixteen pounds apiece. It is the intention of Mr. W. to offer some of this breed of sheep for sale about the first of October next.

Great Sale of Durham Cattle.

The Cincinnati Daily News furnishes us the following account of the sale of Maj. C. S. CLARKSON'S stock of Durham Cattle, held on the 27th and 28th days of June, 1838, at his farm, three miles from Cincinnati. The sale was well attended by the farmers of Ohio, Kentucky, Indiana, Illinois, &c., and the prices show that there was a spirited competition. The total sales amounted to $26,867,50.

COWS AND HEIFERS.

No. 1. Minerva, six years old, roan cow, (imp'td) —C. S. Todd,..... $975
2. Octavia, pied, red and white, 4 years old—Wm. Burnett,..... 725
3. Pennsylvania and Calf, roan cow, 7 years old —W. A. Warner,..... 775
4. Lady Roan, 7 years old—Doctor Clarkson,.. 750
(Lady Roan was afterwards sold for $800.)
5. Snow Drop and Calf, white cow, 4 years old —E. B. Reeder,..... 800
6. Florida, 2 years old and Calf, (No. 18) 4 weeks —J. Mahard, jun..... 1,075
7. Belina, pied heifer, 2 years old—Doct. Clarkson,..... 875
8. Kitty Clover, 7 years old—C. S. Todd,..... 700
9. Prudence, 7 years old—W. A. Warner,..... 570
10. Emma and Calf, roan cow, 3 years old—Thos. L. Machoy,..... 850
(Emma and Calf since resold at an advance.)
11. Hyacinth, 12 years old, private sale—E. B. Reeder,..... 1,000
12. Pink, one year old, red and white heifer—E. B. Reeder,..... 700
13. Rose Bud, one year old, red and white heifer—Wm. Burnett,..... 850
14. White Rose, 1 year old, white with few yellow spots—Lot Pugh,..... 800
15. Dahlia, 11 months old, white heifer—W. A. Warner,..... 475
16. Lilly of the Valley, 11 months old, roan heifer —C. S. Todd,..... 400
17. Susan, roan heifer, one year old—Lot Pugh, 550
19. Stella, red and white heifer, 7 mos. old—Lot Pugh,..... 410
20. Daisy and Calf, red cow—C. S. Todd,..... 460
21. Speckled Daisy, speckled cow, 4 yrs. old—Townsend Hill,..... 400
22. Beauty and Calf, red and white heifer, 3 years old—Elijah Wood,..... 200
23. Primrose, red and white, 2 years old—C. White,..... 220
26. Speckled Durham, roan cow, 8 years old—W. Phillips,..... 300
27. Duchess, red cow with white spots, 6 years old—I. H. Kemper,..... 300
28. Blossom and Calf, red cow with white spots, 3 years old—J. Manhard, jun..... 750
29. Myrtle, pied red and white heifer, 1 year old—E. B. Reeder,..... 320
31. Juliet, red and white heifer, 2 years old, mixed blood—Capt. Butler,..... 100
32. Laura, roan calf, 9 months old—W. A. Warner,..... 230
33. Venus, red and white, 9 years old, ½ blood—Capt. Butler,..... 150
34. Young Venus, red and white cow, 4 years old —W. Philips,..... 185
36. Matilda, 2 years old, mixed blood—C. Scott. 200
37. Flora, roan cow, 7 years old—Abm. Stansifer, 225
38. Cornelia, roan heifer, 2 yrs. old, mixed blood —J. Mahard, jun..... 175
39. White Lilly, 11 months old, mixed blood—C. S. Todd,..... 330
40. Nora and Calf, deep red cow, mixed blood—Wm. Hingham,..... 120
41. Caroline, deep red heifer, 2 years old, part blood—E. B. Reeder,..... 165
42. Ruby, roan heifer, 1 year old—W. A. Warner, 225
43. Cherry, red cow, 7 years old—Jonathan Young,..... 135
44 and 45. Mulberry and Calf, red heifer, 2 years old—Chesteen Scott,..... 240
47 and 48. Speckled Legs and Calf, 2 years old—John J. Wright,..... 150
49 and 50. Old Kentuck and Calf, Major H. Gano, 135
52. Clara and Calf, red and white, 3 yrs. old—Abm. Stansifer,..... 160
53. Cora, red and white heifer, 1 year old—W. Philips,..... 95
54. Lucy, mixed blood, 2 years old—Rev. J. E. Baughman,..... 170
55. Nancy, mixed blood, 1 year old—W. Worthington,..... 70
56 and 57. Harriet and Calf, mixed blood—Rev. J. E. Baughman,..... 185
58. Maria, yearling, mixed blood—C. S. Todd,... 110
59. Rose, 6 years old, half blood—C. White,.... 90
60. Line Back, 4 years old, heifer—Rev. J. E. Baughman,..... 60
61. Spot, 4 years old, half blood, good milker—W. Philips,..... 200
63. Clorinda and Calf, mixed blood—Elijah Wood, 205
64. May-Flower, yearling heifer—Capt. Butler,.. 465
65. Tulip, deep red cow, 4 years old—Maj. D. Gano,..... 65
69 and 70. Red Bird and Calf—Major D. Gano,.. 65
72. Pet and Calf, half blood—Maj. D. Gano,..... 50
90. Fanny Wright, 7 months old—W. E. Warner, 145
92. Lady of the Lake—W. Phillips,..... 120
93. Nancy Dawson—C. S. Todd,..... 60
94. Sweet Briar—Staunton,..... 75
95. Fair Star and Calf, Maj. D. Gano,..... 85
96. Morning Glory—....."....."..... 90
97. Clara Fisher—....."....."..... 37
98. Cherry Ripe and Calf—Rev. J. E. Baughman, 75

BULLS.

No. 74. Ohio, white bull, 3 years old—Fabigen & White,..... 1450
75. Proclamation, deep red, white spots, 6 years old, sold to Jos. Lawrence Esq. prior to sale,... 600
76. Texas, 2 years old, white bull—Thos. L. McChoy,..... 710
77. Colossus, 8 months old, white Bull—C. S. Todd,..... 725
80. Col. Crocket, 1 year old, red and white—J. H. Ellis,..... 575
(Afterwards resold for $1,000.)

82. Don Juan, 1 year old, red bull—Geo. Bryan,... 138
83. Cortez, roan bull, 3 years old—J. T. Ten Eick, 80
84. President, spotted red and white, 11 months old—C. S. Todd,..... 190
85. Cato, roan, 11 months old—Doctor Clarkson, 300
87. Leopard, roan, 1 year old, mixed blood—Geo. Bryan,..... 75
88. Nimrod, roan calf, 7 months old—W. Worthington,..... 80
91. Duke—W. Kingham,..... 120

PRIVATE SALE.

78. Frederick, roan, nine months old—Buckingham & Mahard,..... 1000

☞ Note.—Minna and Calf (Colossus) sold for $1,700, and were re-purchased by Major Clarkson at an advance, he having reserved no bid at his sale.

Lilly of the Valley was also re-purchased by Major C.

SILK.

From an investigation, which I prosecuted last winter to some considerable extent, I ascertained that silk could be manufactured and raised cheaper than cotton or flax. At least, I satisfied myself on the subject. Children and aged people can perform most of the labor of procuring the raw silk, which is the principal part. Let us make an estimate.

In one acre there are 43,560 square feet,
1210 trees in one acre, 6 ft. by 6,
4840 " " " 1½ ft. by 6.
Each tree, (Italian Mulberry, 6 years old) will produce 6 lbs. of leaves.
50 lbs. of leaves (some say 36) will feed 1000 worms.
300 cocoons will weigh one pound.
3000 cocoons (or 10 lbs.) will make one pound of silk.
30,000 trees, 6 years old, will produce 180,000 pounds of leaves;
which will feed (at 45 lbs. per thousand) four millions of worms. Allow 3000 to a pound of silk; this, at $3 per pound, will amount to 3999 dollars. Reeled silk is, however, oftener valued at five or six dollars the pound than three.

The above calculation is made on the white mulberry. The introduction of the Morus multicaulis into this country, will be an era in the silk business. It will reduce the labor of raising the raw silk about one-half, if not two-thirds. It saves nine-tenths of the labor in gathering the leaves. Those leaves which are found to produce better silk, grow from 25 to 35 inches in circumference. One pound of them contains one-third more nutritive matter than a pound of the best white mulberry leaves.

I have seen silk of the most durable texture, manufactured in our farmers' families, on the common spinning wheel, or loom.

In Economy, Beaver county, Pa., they make pantaloons, jackets, &c. of the silk tow. It is used in place of common linsey, or jeans. Their sewing silk, vestings, lustrings, pocket handkerchiefs and dress handkerchiefs, are of the very best quality. They have no ground occupied exclusively by mulberries; but plant their streets and sidewalks, and garden alleys, and hedges with them.

However, to make the business at once successful and profitable, every farmer ought to start a nursery of mulberry trees immediately; calculating, in the course of a few years, to have two or three acres set with them, besides all his lanes and yards, and useless corners. If he should happen to live in some of the barren or hilly parts of Ohio, why, all the better; he can then set his whole farm with them. From one tree of the morus multicaulis, you can raise many thousands in four or five years. Every limb may be cut into as many pieces as there are buds upon it, and every bud will produce a tree.

There is a Connecticut farmer who lives near me, whose wife and children have for several years manufactured sewing silk in sufficient quantities, nearly, if not entirely, to clothe the whole family, and at least to supply all that part of their dress which had to be bought. They gathered their leaves from the native mulberry which grows wild in the woods.—*Yankee Farmer.*

Making and Repairing Roads.

We consider our whole system of road making, defective, and in many cases but little better than useless. The fault does not lay with surveyors or with towns, but the system itself needs regenerating. There has been money enough raised, within the last twenty years, to make every rod of road now laid out, a beautiful turnpike; and how do we now find many of them? full of ruts, rocks and holes, hardly safe to drive a carriage over faster than a walk, and we can hardly expect any thing better than this, until there is a change in our present system of road making. If, however, surveyors would be a little more particular to round the middle of the road, and plough down well at the sides of the travelled path, and scrape a quantity of pan and gravel, to cover the soil first scraped into the middle of the road, they will find their work to be much more durable and permanent, than it is generally. Care should be taken to drain the water from the gutters at the sides of the road.—*Maine Farmer.*

COMMUNICATION.

PRICES OF WOOL.

It is to be regretted, Mr. Tucker, that among other matters which might give much interest to your journal, that you do not furnish your numerous readers, from time to time, some opinions founded upon the best data which may be in your power to collect, in reference to the *prospective* market prices for our two great staples, Wool and Wheat. You may suppose, sir, all this properly belongs to the *newspaper;* what is strictly a Price Current, undoubtedly does. But by establishing a correspondence on a limited scale, and entitled to your entire confidence, it would be in your power to spread before your subscribers, generally correct opinions, which would guide them in their course, who are otherwise, through ignorance, left to the mercy of speculators. You must know that many who are subscribers to the Genesee Farmer do not take any other paper, and with those such information as I have suggested, will be highly appreciated. The farmer looks to you for information in reference to the cultivation of his crops, and it appears to me quite as legitimate, that he should look to the same source for information as to the prospective prices of his leading commodities. Situated as you are, in the heart of the garden of America for wheat, it would not be necessary to step out of the way in order to obtain the right sort of information in regard to that;—establishing a correspondence at Boston and Providence, would enable you to obtain pretty correct information in respect to wool. However, time will not allow me to furnish at length the reasons for urging you to this,—in calling your attention to it, I trust you will not consider it presumption on my part. I feel a great interest in the Genesee Farmer, and am confident the course I recommend will add materially to its value and usefulness. My principle purpose now is, to spread before your readers the prices which foreign wools sustain in the English market. I have before me an English paper of May 2d, and have rendered the sterling into our national currency, rejecting fractions.

Electoral Saxony wool,.....	88 a 115 cts.
Austrian, Bohemian and other German fine wools,.....	70 a 95 "
2d do.....	44 a 67 "
Hungarian,.....	44 a 67 "
Leonesa,.....	44 a 71 "
Segovia,.....	34 a 66 "
Soria,.....	44 a 66 "
Cacaris,.....	44 a 71 "
Spanish Lamb's wool,.....	31 a 55 "
German and Spanish cross,.....	44 a 67 "
Portugal sheep,.....	44 a 66 "
Australian fine cross,.....	44 a 76 "
Native do.....	31 a 55 "
Cape of Good Hope,.....	30 a 63 "

Now, it will strike every one with surprise, on observing the great disparity in prices, as above exhibited, of wools in the English market, and our own. With the exception of four kinds, the *minimum* or lowest rates, are the *maximum* or highest rates, which our manufacturers, or their agents, are paying, at present, for some of the best clips grown in this quarter, composing this county, Seneca, Cayuga and Onondaga,—my information does not extend further. From verbal and written information, I state with confidence, that with the exception of Electoral wool and Austrian fine wools, the wool grown in the New England states, as well as *much* grown in this state, is upon a par, as regards quality, (but unfortunately not in cleanliness,) with the *average* of the other varieties in the above list. The natural inference is, that our wool market, although not established for the year, yet at present is entirely too low, and further, that all the profits of growing wool, at the present prices, will lodge in the pockets of the manufacturers. With the brilliant prospects which await them, I think, for one, they ought to advance;—at all events it is only necessary for the wool grower to *say it*, and *do it*, and an advance must follow. I shall not offer, directly, advice;—suffice it to say, notwithstanding I have received several offers as high as any sales which have transpired, yet for the above reasons I have declined acceptance.

Before I conclude, I wish to call the attention of your readers to the great range of prices, or material difference between the lowest and best quality of each kind named in the above list; proving the great regard to *discrimination* of quality, and consequently price, made by the English manufacturer. In this country it is a perfect *higeldepigly* business; and the consequences will soon be, that every *fine wooled sheep* will be superseded by a hardier, coarser, and heavy fleeced animal. This almost total indifference to discrimination I barely alluded to in a former communication,—I shall not further pursue it now, as I have not *all* the materials ready to support the positions I shall endeavor to maintain; but when the iron is hot, the manufacturer may expect some fire to fly. I will conclude by saying again to the manufacturer—if you would have us improve our flocks, *discriminate*. L. A. M.

Lansing, Tompkins Co.

ACCOUNT CURRENT

Thrifty farmers are in the habit of making out a balance sheet for each year, in order to ascertain what they have made or lost by their farming operations, and with a view to profit from their errors. Now Uncle Sam is at least nominally a farmer, and, like all other farmers, can only expect to prosper in proportion as his sales exceed his purchases; and, at all events, if we find that he has not raised his own provisions, we may set it down as certain, that he does not work it right, and that unless he mends his ways, he must ultimately fail. The business of this nation, to be independent and prosperous, should be to provide breadstuffs, not only for its own population, but a surplus, sufficient to pay for the foreign commodities which we consume. Such would be the course of the prudent farmer; and we should think little of the shoemaker, or the hatter, who should be obliged to buy shoes or hats for his family.

In striking the balance of Uncle Sam's account, we would premise, that our estimates embrace only breadstuffs, the great staples of the northern and middle states, and which constitute the principal means, in these states, of paying for the foreign merchandize which we consume.

By a statement from the treasury department, it appears, that the importations and exportations of grain, flour and meal, during the year 1837, were as under stated, estimated in dollars.

Articles.	*Imported.*	*Exported.*
Flour,.....	$122,691	$2,987,269
Wheat,.....	4,154,325	27,206
Rye and rye meal,.....	333,695	165,467
Corn and meal,.....	3,918	911,634
Other grain, bread, &c.....	8,837	325,077
	$4,623,466	$3,416,653
Deduct exports,.....	3,416,653	
Bal. against Uncle Sam,.....	$1,206,813	

in the commodities which it is his business to raise and sell, and which he never ought to be obliged to buy.

If we add to this balance of.....	$1,206,813
the amount which the old gentleman paid last year for foreign silks, viz.....	14,352,823
and for foreign sugar,.....	12,514,504
It will show an annual balance against him of.....	28,074,140

Twenty-eight millions of dollars, in articles which it is either his professed business to raise, or which he can produce by his own labor, and from his own soil. This balance would however be reduced by the value of the silk and sugar which he exported in 1837, to about twenty millions of dollars. If these facts were applied to the affairs of an individual farmer, we should naturally suppose that the boys were either too proud or to lazy too work, and perhaps both. And wherein does the analogy fail between an individual farmer and a nation of farmers. A diminution of crops was among the causes of the late national embarrassments; and our surplus products have been relied upon to pay the foreign balances against us.

What would be the conduct of the individual farmer who should find his affairs thus going to ruin? Would he not instruct his boys in the science and practice of his business, and stimulate them to labor, by rewards, that the farm might produce enough and to spare, to pay off his debts, and keep something on hand for a wet day? And if such would be the politic course in the manager of a farm, why would it not be wise in the managers of a state, or of a nation? They give millions annually to aid those who add nothing to our national wealth, and which tend to elevate the idler above the man of industry? Why not give for instructing the farmer and mechanic how to double the profits of their labor? We insist, that the higher branches of learning, when blended with practical instruc-

tion in the useful arts, and particularly in the business of agriculture, are more profitable to a state, than they are when applied to the learned professions.—*Cultivator.*

From the New England Farmer.

North Providence, 6 mo. 4, 1838.

Respected Friend, Henry Colman—I have never known more profitable results from the application of any manure to light and sterile soils, whether loamy, sandy, or gravelly, than from leeched or unleeched ashes. They have long been used in Rhode Island with great success, especially in the growing of barley and clover to which they seem peculiarly adapted. As evidence of the estimation in which they are held by the farmers of the Island, ten cents per bushel have been paid for them in Newport for the last twenty years, and upwards, and though considerable quantities have been furnished from different places on the sea-board, the demand for them has always exceeded the supply. They are generally used at the time of seeding, spread on an even surface and harrowed in lightly with the grain and grass seed. The quantity varying from 50 to 100 bushels per acre.

In 1833, a lot of land falling under my management which had then recently been purchased at $30 per acre, seven acres of it and perhaps the least valuable part, which in my opinion never possessed fertility, though it is usually called worn out land, being a sandy plain, gravelly subsoil, were ploughed and rolled in order to secure for the benefit of the crop what little vegetable matter had been turned under; about 1600 bushels leeched ashes were hen spread on the lot, and it was sowed with 10 quarts millet and 16 lbs. southern or small clover seed to the acre. The season proved dry and the seed took badly, the crop of millet was 10 tons by estimation, and was sold for $180. 19 tons clover were supposed to have been obtained the two succeeding years at four cuttings; this too was sold for $316. The clover having nearly all perished in the winter of 1835-6 it was pastured the season following, and last year 1136 bushels ashes having been applied to it, it was again sowed with millet, and stocked as before with southern clover, 20 lbs. to the acre. The product was 13 tons millet, for which I credited the owner $221, retaining it for my own use. Like results have been obtained from similar treatment of the same description of soil in various instances, this not having been selected because the most striking, but because the amount for which the crops sold fixes their value, without knowing exactly the quantity produced, which in each case has been supposed. The labor bestowed on the lot was more or less blended with other business of the farm; it is therefore difficult at this period of time to ascertain the amount charged. I believe however it did not exceed the charge in the subjoined account.

Cost of land,	$210 00
Cost of ashes for both dressings,	215 54
Seed for do.	41 25
Ploughing 10½ days,	21 00
Rolling 3½ do	7 00
Harrowing 3½ do	7 00
Carting outside furrows,	7 50
Sowing 3 days,	3 00
Carting and spreading ashes,	54 00
Cutting, curing, and housing 41 tons millet and clover,	123 00
5 years taxes,	2 10
Interest accruing on transaction,	46 00
	$737 39
Cr.	
By produce sold, amounting to	$717 00
Value of pasturage,	15 00
Value of lot in its present condition,	385 00
	$1117 00
	737 39
	$379 61

There is reason to suppose from present appearances that the lot in question will cut two tons clover this season per acre; it will therefore be seen that my valuation is not a high one. A repetition of the treatment it has received, would no doubt improve still more the texture of the soil, but I am inclined to think there might be a falling off instead of an advancement in the amount of its productions, by subsequent ashings. Should this be the case it would indicate a suitable condition for more permanent improvement by manuring.

There is but one instance in which I can make out the exact quantity of milk sold in a year. It amounts to 11,131½ gallons, this is exclusive of a supply for the family, and was produced by I suppose an average of 20 cows. There have been seasons when I think a larger quantity has been produced in proportion to the number of cows kept, but the manner in which my books have been kept, hardly ever specifying more than the amount received for the article sold, does not enable me to determine with accuracy the quantity sold in any other year. In the instance given the milk was disposed of to one person at a certain rate, which with the amount of sales being known determines the quantity. How much was used by the family is not known, probably not more than 300 gallons.

In regard to the bog there is yet but little to be said, a greater part of it being yet on the tide of experiment, whether successful or not, time will determine. The burnt part has hitherto been most productive. In 1835, ½ acre was pared, the turf burnt, and the ashes spread over the surface. The year following it was planted with potatoes, the crop paying for the land at $30 per acre and all expenses accruing from its improvement. Last year nothing was taken from it, it was seeded the latter part of summer, and now promises a large crop of hay.

Respectfully thy friend,

Adam Anthony.

HAYING.

This is by many, considered the hardest part of the labor required to be performed on a farm, and it is that in which the younger portion of the farmers delight most to perform. To be well skilled in the business, and capable of "leading a gang of hands in haying," is the ne plus ultra of the ambition of many young men engaged in farming, and it is no mean qualification. To get hay and do it in a proper and profitable manner, requires more skill and calculation, than is, by many, allowed to farmers to possess.

As the time is at hand when this business must be commenced, we shall lay down a few practical hints, for the benefit of those who have a mind to follow them.

See that you are well supplied with tools and have them in good order, beforehand. Where repairs are necessary have them done, and have an extra scythe and a few extra pitchforks, and rake-handles, bows and teeth, in such a state of readiness, that an accident can be repaired in three minutes. We have known some tons of hay to get wet and very much injured, in consequence of negligence to those apparently trifling particulars. The most careful hand in the hurry of loading, may break a handle, and then if you have none ready to replace it, the first step is to send to the neighbors to borrow one, and if it so happens that they are using theirs, a delay of two or three hours is the consequence, and night overtakes you with two or three loads of hay in the field—next day comes a rain, and then, to say nothing of the damage to the hay, you have to spend a dollar or two in time to open and spread it, and get it fit to go in, and all for want of having a handle ready to put to your pitchfork, which might have been made some rainy day before haying.

In olden times, it was thought that haying could not be performed without *rum*. Although a man drank at no other time, yet he must have his drams in haying. But the progress of light and intelligence, has satisfactorily proved that a greater absurdity never existed, than the supposition that ardent spirits of any kind, strengthens a man to labor. Its place, has therefore, been supplied, even in the mowing field by cider, beer, cold coffee, milk, sweetened water, &c., all of which we regard as minor evils. There is no beverage so healthful and delicious, to a man truly thirsty, as pure spring water. But, it will be said, that if a man drinks as much cold water as he wants, it will weaken him so much that he cannot perform his labor. The same caution should be exercised in relation to drinking, that is in eating. There is no necessity for a man either to eat or drink, so much that he cannot work. A practical and observing farmer, once told us, that however warm the weather or arduous the labor he was performing, he never drank before noon, and another one told us that however thirsty he might be, he never drank more than half a tumbler full at one time. By practicing on the precepts of both these gentlemen, beneficial results will be enjoyed. If you become very thirsty in the forenoon, take only water enough to wet the mouth and throat, and in the afternoon drink no more than half a tumbler full at one time, and drink as seldom as you can, and you will find your strength and vigor, very much accelerated.—*Maine Farmer.*

Time for Cutting Timber.

There are different opinions as to the best season for cutting timber; some persons recommend cutting in the middle of the winter, as the sap is then still, others prefer the middle of the summer, and many recommend cutting in the fall, when the sap is down, as the saying is. We have no doubt that timber cut in the fall or in the former part of winter, will last longer than that cut in the spring or first of summer, if the sticks of timber be large and the bark remains on so that the timber cannot season; the great quantity of sap in it will doubtless hasten its decomposition, if the sap cannot run out or becomes dried.

We have noticed that timber cut in June, when the bark peels freely, if it is of a proper size and well situated to season thoroughly, is very close, heavy and durable. We have heard joiners observe, that timber cut in June makes the most solid, heavy and durable plane stocks; and we have heard those engaged in ship building observe that timber cut in June would last longer than that cut at any other season.—*Yankee Farmer.*

HOEING CORN.

The object of hoeing and working the soil about corn, is first, to destroy all weeds; and secondly, to loosen the soil and the surface, that it may the more readily absorb dews and rains which fall upon it, and prevent the evaporation of moisture, which takes place much sooner where the soil is hard than where it is kept loose and mellow. The practice so prevalent, of deep cultivation by the plough between rows of corn is not to be recommended. If the ground has been properly prepared before planting, when not to wet, it will not need this additional loosening. After the corn has arrived at the usual size for hoeing, the soil should only be disturbed at the surface. For as the plants increase in size, they send out long fibrous thread-like roots in all directions, which branch every way and run all over the ground; and it is through these that they derive a large portion of their nourishment. To break or injure these would therefore materially retard the growth of plants by cutting off their accustomed supply of food, and yet surprising as it may seem, a notion is very prevalent, that it is serviceable to break the roots of corn. But what should we think of such reasoning as this were it applied to animals. What should we think if it were declared to be serviceable to cattle to deprive them of their supply of food? Or as a writer somewhere says, what would be thought of the reason of a man, who should declare it as his opinion, and practically enforce it, that the best way to fatten a bullock, is to wound his tongue, break his teeth and batter his jaws, whenever he reached forward his head for food? Why then treat plants, which, as much as animals, require their proper nourishment, in the same way?

Hilling corn we would also disapprove, although it is very commonly practi ed. Not unfrequently in performing this operation, all the loose mellow earth is scraped away from between the rows and heaped up around the plants, forming a sort of roof about them, throwing off the rain, which runs down into the hard soil thus laid bare at the bottom of the soil, which the first dry weather bakes to the last degree of hardness, so that the roots can receive no moisture here, and little within these artificial pyramids. A reason is assigned in favor of hilling, —that it makes the corn stand firmer and more erect, and less liable to be broken down by the wind. This may be the case when the plants are small, and do not need any such help; but when they attain a height of several feet, and are loaded with leaves and ears, it must be evident that a little loose earth piled about the roots is totally insufficient for such a purpose. It is the strong roots which radiate from the stock, which are to support it there; and to bury these roots deep under the surface while they are growing, and thus shut out from them both heat and air, and render them weak and tender, would only help to bring about the very thing we wish to prevent.

It is important to farmers that this subject be well understood; for a little knowledge may save may weary steps, and be the means of an abundant crop into the bargain. But if any farmers doubt the accuracy of our reasoning, we would request them to test it by experiment, by ploughing and hilling high one part of their corn, and using the cultivator and applying the same amount of labor in mellowing the flat surface of the other; and then measure the result.—*Yankee Farmer.*

On Summer Fallowing.

Schaghticoke, June 5th, 1838.

Sir—With a desire to gain information, permit me while I give my own, to ask you opinion as well as that of some of your numerous correspondents, upon the subject of summer fallows. 1st. Are they ever beneficial to the land or crop which it is intended to produce? 2d. If beneficial, are the benefits an equivalent to the enormous expense attending them? 3d. Would not a clover sod be a better preparation for wheat than the naked fallows? Satisfactory answers to these queries, I conceive to be of immense importance to your readers. Some of the agricultural writers of Great Britain, contend that the general abandonment of the naked fallow system in that kingdom, has tended more to produce the high stand which her agriculture now sustains, that every other improvement combined. If such is the fact in relation to Great Britain, why would not its abandonment in this country be attended with a like good result? Look at the immense expense in preparing our lands for wheat. Our farmers, by the course they pursue, are not only at the expense of one or two extra ploughings, but lose the use of their lands through the summer, which could be made to support an immense number of cattle, and thereby greatly augment the profits of these farmers, and increase the quantity and improve the quality of those manures, which have been rightly termed, "the magic wand that the farmer uses," and upon the production and just application of which not only depends our immediate interests, but the high reputation which we hope ere long to see our agriculture sustain. "Nature seems to require no rest, and the earth was evidently designed to produce a constant uninterrupted vegetation." If then the pro-

ductive quality of the earth never ceases, why should this principle of nature be perverted, and our lands laid bare and exposed to evaporation, instead of being covered and protected. One argument often produced in favor of the fallow system is, that it cleans the land from weeds. Tull, in speaking of the British fallows, said, they presented nothing but a conflict between the farmer and his weeds, in which the latter generally prevailed. Our lands well laid down in grass, are free from weeds, and why are they not in as good a condition to receive a crop with one good ploughing as a half a dozen? It is a fact incontrovertible, that the decomposition of vegetable matter produces food for plants. By summer fallowing, the vegetable matter is all decomposed and evaporated before the crop is put upon the land. The old school of farmers tell us that the sod should be well rotted before the soil is fit to receive the seed. This idea appears as absurd to me as as that straw should be reduced to a powder before we apply it to our soils. The general practice which has been pursued upon the wheat farms in this county, is to sow wheat every other year after summer fallow, until the occupants found that their lands would no longer produce wheat. It would have been millions in their pockets had they pursued an alternative system, and known that it was the fallow, not the wheat, that so soon exhausted their lands. Wheat farms should be made stocks farms. Every farm of 200 acres, by alternating wheat and clover, and cultivating a few acres of roots, can be made to support more stock than 100 acres upon which a plough is never used, as the straw would help to winter them, and with the increased quantity of manure, their crops would, in a few years, be doubled, and the soil continually enriched. I have been perfectly successful in raising wheat upon a clover sod; and so fully am I convinced of the bad effects of summer fallows, that unless this mistaken kindness towards the wheat crop can be abandoned, I believe it would be a benefit to this country should the wheat insects spread over every part of it, and leave us expendant upon the eastern world for this part of our bread stuffs. Yours, with respect,

J. C. MATHER.

Remarks.—The reasoning of our correspondent is sound, and its correctness is verified by results of all who have a fair trial to fallow crops, as a substitute for summer fallows. The only cases, in our opinion, were naked fallows should be tolerated, that is repeated summer ploughings given for a wheat or rye crop, is where the soil is a stiff wet clay, which will not grow clover, and lands which abound in fibrous, woody matter, when first reclaimed by draining. Good draining, and especially what is termed furrow draining, will supersede the necessity of summer fallowing wet and stiff clays, and vastly improve the texture and productiveness of the soil. If such grounds are ploughed in narrow ridges in autumn, and the furrows well cleaned, that the surplus water may pass off, they may be sown with oats early in the spring, and be in fine condition for winter grain in September. The difference in profit between the two modes of converting sward into wheat, may be stated thus: The three ploughings and harrowings for summer fallow, may be estimated at $8, and the use of the land is virtually lost for the season. In the other mode two ploughings suffice, for the oat and wheat crop, thus saving at least $2.-50 of the outlay—while the oat crop, if any way tolerable, will make a return of twelve or fifteen dollars additional. The land will be richer, and in better condition for wheat, because it will retain the vegetable matter of the sod, than if it is summer fallowed. The fertilizing matter of the sward is exposed and wasted by the cross ploughings. To render a fallow a cleaning process, it is customary, in Britain, to pick and gather, after the harrowings, the perennial roots and quack grass, and to burn or mix them with the dung—a labor which our farmers seldom or ever incur.—*Cultivator.*

Disease of Corn---"The French."

There is a disease of corn, popularly called "*the French*," the cause and remedy of which, seem to have been satisfactorily discovered. The plants attacked by this disease, exhibit a yellowish feeble appearance, the blades are wilted, the stalks never attain the usual size and rarely mature any grain. Spots thus affected, are sometimes found in the fields embracing a hundred plants, where the soil is as good as elsewhere. The injury is caused by the black ant depositing its larvæ in the joint just below the ground connecting the radical or root with the stalk. From the punctures thus made, exudes the juice of the plant, which on its discharge forms into a jelly. An excellent remedy is found in the application of slaked lime or leached ashes to the hills when planting the seed, the alkaline or caustic effects of which serve to destroy the ants. We know a case, where, for several years, a colony of ants having destroyed almost every description of vegetation, the land was treated with decided success, the injury remedied and a good crop obtained, by the application of leached ashes. The same farmer, also, in making an experiment on the value of the hydrate of lime applied to the hills of corn, had the satisfaction to find, not only that the growth of the plants was greatly stimulated, but that none of them were affected by "the French" as were others in the same field, to the hills of which no lime had been applied. These experiments seem to us decisive; and we invite attention to them the more confidently, as it is certain, that the proposed remedy, in its action as a stimulating manure, will increase the production of the plants to which it is applied, even beyond that of those not affected by the disease.—*Franklin Farmer.*

The Crops and the Season.

Poughkeepsie, July 11.—We were out in Hopewell in the town of Fishkill, and Clove Hollow in Union Vale, on Wednesday last, and we think we never saw the earth so richly garnished as it now is. There is nothing excepting oats, but what promises to yield abundantly. Grass is being cut, and the weather for some days has been very fine for hay-making. Indian corn never looked better, and if the season continues as propitious as it has thus far been, the crop will exceed any raised in Dutchess for years. Wheat is also superior, and although in a few pieces the insect has done some damage, yet its ravages have been but small. Oats only look diminutive. They will not, probably produce so well as in the two seasons past, although we saw some good fields of them. But take the prospect all in all, it is cheering, and rarely, if ever, could the producer and consumer look forward to the future with more encouragement or brighter hopes. In the language of Thompson we can say—

"Be gracious Heaven! for now laborious man
Has done his part. Ye fostering breezes, blow!
Ye softening dews, ye tender showers, descend,
And crown the whole with smiling plenty!"

Geneva, July 11.—The season, so far, has been a real, *old-fashioned one.* The journals from the north, south, east and west, all unite in saying that the crops never looked better than at present. In this county and neighborhood, the farmers give the most flattering accounts of the prospects. Within a few weeks, the progress of vegetation has been most uncommonly rapid.

Boston July 9.

The season, it is uniformly acknowledged, is one of the most promising that has gladdened the hearts of New England farmers for a number of years. We can hardly open a paper from the interior that does not contain a confirmation of this remark.

During a recent journey from hence to Connecticut river, into the counties of Hampshire and Franklin, we have been eye witness to the luxuriance of the fields of Rye and Wheat, and the uncommon forwardness of Indian Corn. There is hardly an article of ordinary cultivation, which does not promise a liberal reward for the labor bestowed on it. But such lots of grass as we saw in Worcester county, authorize the prediction that hay must be the most *plentiful*, as it is certainly, when within reasonable distance of a market, one of the most *profitable*, of agricultural products.—*Courier.*

Indianapolis, June 30.

On the afternoon of the 13th inst., we had one of the heaviest rains that has been known in this vicinity. It commenced raining about 2 o'clock and continued to pour down in torrents for nearly four hours, with vivid lightening and heavy peals of thunder—which struck a house on Washington street, but without much damage—on the afternoon of the 23d—we were visited with another shower of almost equal magnitude, and again on the evening of the 27th another, during which perhaps as much rain fell as during the previous one. We have had also had frequent falls of rain at intervals between the above keeping the ground so completely soaked, that it is with great difficulty that farmers can work their crops. The weather has been very warm, and a greater growth of grass and weeds, than corn has in many places been the consequence. Our farmers have much to discourage them in cultivating their corn crop this year. The late frosty weather prevented as early planting as usual, and since the corn has been large enough to work, the rains have rendered it almost impossible on wet lands, and on such lands the superabundance of water has materially injured the corn.

But let our farmers thus situated not be discouraged, but profit by experience. While their fields are flooded with water it affords a very good opportunity to observe the natural course and flow of the water, and where ditches and drains ought to be While the water is retiring let them plan their ditches, and when a favorable season arrives—let them be dug—in such manner as to answer the purpose intended. We were much gratified some days since in observing a ditch dug on the two higher sides of a field, the one on the outside of the fence, along the road, thus answering a double purpose of draining the raod, and the field, the other on the inside of the field, adjoining the fence. By this means, the water was entirely cut off from flowing the field from the higher lands adjoining, and the descent of the field was such that the water soon runs off. In order to perfect the system a few blind ditches running through the lower parts of the field, covered, and placed below the plough—would render that field which is of a clay and moist soil, so dry as to be susceptible of cultivation in almost any season.—*Farmer & Stock Register.*

The Baltimore Patriot of July 7, observes:—"We are in the midst of wheat harvest, and nearly all the accounts that reach us, are of the most cheering promise of abundance. The weather has been highly auspicious for ripening the grain fields, as it has been more recently, for safely housing their rich products. And all things considered, it may be doubted whether a better or larger wheat and rye crop has been grown in the United States for ten years past, than that of the present season."

A letter from York, Pa., under date of the 5th July, says: "the crops of hay here are abundant—more so than last year; those of rye, good; and of wheat, the indications promise a better yield than in any season within my recollection. I may also add that more wheat was put in the ground last fall, than usual. The oats and corn look well."

As touching the prospects of the crops in the southwest, the Nashville Whig of the 27th ult. says—"In our own immediate neighborhood the grain crops look well, and the weather is altogether as favorable as could be wished."

The Huntsville Advocate of the 26th, reports the prospects of the grain crops of North Alabama as uncommonly promising—Indian Corn, it is stated, will be abundant, the crop of oats, the heaviest ever seen in the country, and wheat and rye, though somewhat later than usual, will also turn out a superior crop.

Grazing of Sheep in Corn Fields.

Baltimore, June 21, 1838.

Mr. Roberts—A few days since while riding in the country with a friend, about 12 miles from this city, we observed a flock of sheep deliberately *feeding in a corn field.* Supposing they were trespassers, we lost no time in informing the proprietor of the circumstance; when to our surprise he laughed and said they would do no harm, that they were put in the field for the purpose of destroying the blue grass, &c., and farther, that sheep would never touch growing corn! Nothing but the sight of the experiment with my own eyes would have made me believe this statement; but having seen it, and observed also the manner in which our information, that the sheep were in his corn field, was received by him, I was obliged to yield my belief. You will readily see the importance, in various bearings, of this information to our farmers, without a special detail or reference.

Farmer & Gardener.] Gideon B. Smith.

Disease of Rye.

We have seen two fields of rye this season very much injured by a small black worm. The rye last week presented the appearance of being prematurely ripe—having a sickly, yellow appearance—the leaves or blades dead—the stalks disfigured with light brown spots, resembling rust or oxide of iron—the heads shrivelled and deadly, and the grains half formed, feeble and unhealthy. We are very sorry we were unable to learn more of this disease, than the opinion of a laborer, that it was produced by a small black worm which he saw in numbers, committing its depredations in the head or ear of the grain. The two fields to which we allude, are owned by the same person, though 12 or 15 miles apart. We shall endeavor to investigate the subject further, and hope others will communicate any information in regard to a similar affection of the rye crop. We have not heard, however, of another field similarly injured; and indeed we may say that the rye crop generally, is unusually good. —*Franklin Farmer.*

Early Potatoes.

This morning, the twenty-seventh of June, we were presented with half a peck of new ripe potatoes, raised upon the farm of Mr. Eben French, by his superintendant, Mr. Beacroft. We have before noticed this variety of early potatoes as being of an excellent quality, raised by Mr. B. from the seed. We should like to know who of our cotemporaries have had new ripe potatoes this year, before ourself. Certainly not the political editors, for they look hungry enough to eat each other.—*Bangor Farmer.*

Harvest Hands.—The unusually heavy and abundant harvest has occasioned, in growing districts of our own state, and no doubt elsewhere, a great demand for harvest hands. The wages given are said to be almost beyond example. As it is a business that may not be neglected or delayed, some farmers we hear have offered as high as five dollars a day for first rate cradlers.—*Baltimore Patriot.*

Oil Cake.—Over 100 tons of flax seed oil cake was shipped for England on Saturday last. This material, which is the remains of the seed after the oil has been extracted, is extensively used, here and elsewhere, for fatteing cattle.—*New-Yorker.*

Manure---Construction of Barn Cellar.

We have already remarked on the value of manure to the farmer. In our old lands it is idle to think of success in agriculture without some artificial means of enriching the land. We have spokon of the extraordinary prices paid for manure by farmers in the vicinity of our large towns. We know the fact that six dollars have been sometimes paid in the city for a cord of manure; and at a country town several miles in the interior seven dollars and a half per cord were paid the last season for all that could be obtained. Manure it is true must be had; but what shall we say of the good judgment or management of farmers who pay such prices, when the means in abundance of supplying their wants at half this expense are or might be had upon their own premises. We know a farmer, who annually expends five hundred dollars for manure in a city; and then is obliged to transport it at a distance of three or four miles. Yet the same farmer has resources within himself where for the same expense he might obtain twice the amount of manure, and of equal value. He has no barn cellar; he has no compost heap; his cattle are not yarded excepting in winter; he collects no bog mud; he takes no pains to save the contents of his sink and privy; he fats no cattle; he keeps but a single pig; he sells his hay; he sells his milk; he sells his potoes; he raises no esculent vegetables for his stock; and this perpetual purchase and carting of manure, to say nothing of the money paid out, is an occasion of excessive toil, fatigue, and vexation. True he "makes money," even in this way and finds a reasonable compensation for his labor. It would be difficult to turn him from his accustomed track; but will any reflecting mind pretend that "*he works it right.*"

But we will proceed to say what may be done; and then leave it to the farmers to say what ought to be done.

In the first place, then, manure should be as much a specific object of labor and pursuit with the farmer as any of his crops, simply because he cannot have any crops without it. His first business should be to provide a place for its deposit, its accumulation and its security. Manure is money. It costs monoy. It produces money. Precisely then as he would take care of his money, let him take care of his manure. For his use there is no difference between them save that the returns of manure skillfully and faithfully applied are usually more certain and proportionately more liberal than the returns of money. He wants therefore a place for its deposit and its accumulation. It should be near at hand, where it will be easy to transfer to it all that will contribute to its increase. It should be near the barn, where it may receive all the deposits of the cattle; and should be so situated that the liquid as well as the solid manure may be secured. It should be in the neighborhood of the hogs pen, that their manure may go into the common heap. If possible the privy should be near to it, that the powerful manure furnished from that source may be mixed with the collections; and the sink should be so contrived as to empty its rich contents into the common receptacle to moisten it, and increase its efficacy. It should be the great object of the farmer in the next place to secure it from the sun, the rain, and the air. Manure thus protected and housed in the opinion of some of the best farmers in the state, is far more powerful, and, to use their own phrase, it is worth fifty per cent more than that, which is left exposed in the usual mode. It is more active, and more powerful. A barn cellar built expressly for the purpose of thus securing the manure, is the proper receptacle for the compost heap; and to form a general deposit of whatever may be thrown into it.

No farmer therefore should be without a cellar under his whole barn. The cost is comparatively trifling; the uses and advantages most important. It should be well stoned; the bottom made slightly dishing; and paved or made impervious to the water by being puddled with clay. It should have a trap-door or doors in the barn floor and where the cattle are tied, so that all their droppings may be thrown into it; and that mud, or mould, or peat may be easily put into it both for the sake of increasing the heap by these valuable additions and that they may act likewise as absorbents to gather and fix all the liquid manures. It should be high enough to receive a wagon or cart for the purpose of loading; and it should be completely enclosed that the contents may be secured from the sun, and rain and air. The proper site for a barn is on a side hill, where the bottom of the cellar may on one side be on a level with the surface of the ground; and where three sides being formed by an excavation into the side hill may be well stoned; and the fourth side protected by movable wooden doors. It should be likewise a place for housing a certain number of store swine, who are to be employed in turning, dissolving and enriching the contents of the cellar. Such is what a barn cellar ought to be. There are few situations, where such a cellar cannot be formed. We have seen many such cellars, and are happy in perceiving that they are fast coming into use; and that, in regard to barns recently erected or in the process of erection, a valuable barn is now seldom built without such provision. The cost of such a cellar will in any situation be fully paid for in a short time by the increase quantity and increased value of the manure. We often hear farmers say they would have a barn cellar if they could afford it. Now we say that if any man calling himself a farmer cannot afford to make a cellar under his barn, he hardly deserves the name of a farmer and certainly has no pretensions to the character of skilful or wise or provident. We should add that such a cellar should always if possible open to the south. In the spring this is desirable in order to facilitate the removal of the manure; and in a cellar opening to the south, the contents of the cellar are far less likely to be frozen than if the opening of the cellar were to the north and in the shade.

We leave this subject for the present and shall endeavor to resume it in our next. The importance of a barn cellar is so great that we take every occasion to urge its erection on every thrifty farmer, and the suggestions here given, though they may be familiar, embrace the prominent and important points in the construction of a barn cellar.

We might go farther and recommend a separate and water-tight vault for the reception of the liquid manure; to which, by gutters properly constructed, all the urine of the cattle when tied in the barn, might be at once conveyed, with strainers so fixed that the solid parts might be effectually excluded; and that from this reservoir it might be pumped out and distributed at pleasure. This is the universal practice in what may perhaps be considered the best farming district in the world: Flanders; and here these cisterns are made of stone. But this is an advance in improvement to which it can scarcely be expected that our farmers should proceed until a vastly increased and crowded population shall compel them to adopt every practicable means of improvement. We have met with only two cases, where such provision has been made. The advantages in these cases were obviously so great, that though we may not look for any thing like a general introduction, we may at least hope to see such provision occasionally and perhaps frequently made.—*New England Farmer.*

Application of Marl.

On reading the last No. of the Cabinet I perceive that your readers in the lower part of Delaware and the eastern shore of Maryland, where the green sand or marl abounds, are desirous of being informed of the best mode of applying it as indicated by the experience of our New Jersey farmers. It may perhaps save those who are inclined to try it, some trouble and expense to be informed that every known method of application seems to have been resorted to; and that which has been found to answer best, is to use it as a top dressing on sward or grass grounds; the effect is immediate and great, being scarcely to be believed excepting by those who have been spectators of its effects. The quantity applied to an acre, of good marl, is from six to twenty tons; a bushel weighs about a hundred weight—of course a ton is about twenty bushels; more may be applied without any apprehension of injury, but from twelve to fifteen tons per acre is a good dressing, though some have applied twice that quantity. Spread it evenly over the surface of the grass ground in the fall, winter or spring, or whenever you have most leisure, and when done you need not give yourself any further trouble about it; nature will do the rest, and your reward will be certain and great if your marl be good. Whenever you plough down your grass ground which has been thus marled for corn, or any other crop, you will see the effect of it strikingly exhibited in the subsequent crops. It has frequently increased the fertility of the soil more than ten fold, and some crops are believed to be much improved in quality as well as quantity by its application.

The great weight of the marl causes it to sink in the earth, and if it should be ploughed in on its first application, there is some danger of losing part of the good effects of it, by its being placed too remote from the roots of the plants intended to be nourished by it.

It is now agreed on by all, that the fertilizing ingredient of this valuable substance is potash, and the benefits derived from its use are directly proportioned to the quantity of it contained in its composition.—*Farmers' Cabinet.*

New Arrival of Turnep Seeds.

WE have just received from England a large additional supply of TURNEP SEEDS, among which are the following kinds:

Ruta Baga, or Yellow Sweedish,
Dale's Yellow Hybrid,
Yellow Bullock, Yellow Scotch,
Yellow Aberdeen, Red Round,
White Globe or Flat,
White Norfolk, Long Tankard,
Early White Flat Dutch,
White Stone, Yellow Stone,
Yellow Malta, Yellow Dutch.

☞ See descriptive list on page 198, current vol. Genesee Farmer. REYNOLDS & BATEHAM.

Rochester Seed Store, June 23, 1838.

Farm for Sale.

THE subscriber offers for sale a FARM, lying near the Seneca turnpike, two miles west of Manlius village, and three and a half miles from the Erie canal, containing 250 acres of excellent land; rising 220 acres in high cultivation; the soil rich and suitable for every agricultural purpose. There are on the premises, besides the dwelling house, three small convenient houses for the use of hired men who have families. On the Farm are four large Barns, with Sheds and Stables sufficient for 2000 sheep, besides other stock. The orchards are extensive; the fruit select and excellent.

If desired, the farm could be conveniently divided to suit purchasers.

Also, A Farm containing 120 acres of land, about 100 acres in cultivation, lying in the town of Lafayette, 12 miles from the Canal at Syracuse, and about 12 miles from the farm above described. On this farm is a convenient Dwelling House, two large and excellent Barns, with sheds and stables for sheep and stock, a good Saw Mill, surrounded by a lot of valuable timber.

Terms of sale will be favorable. Letters (postage paid) will be attended to. DAVID ELY.

Manlius, Onondaga Co., N. Y., July 2, 1838.

☞ The subscriber will offer at private sale, in September next, 500 Saxon Sheep, of the finest fleece, bred from imported stock. [jy 7-4t] D. ELY.

Seed Buckwheat,

A GOOD clean article for sale low by
June 23. REYNOLDS & BATEHAM.

Red Clover Seed,

A FEW bushels just received, for sale by
June 23. REYNOLDS & BATEHAM.

Root Cultivation.

A LARGE supply of new and genuine Ruta Baga, Mangel Wurtzel, Sugar Beet and Orange Carrot Seed, just received at the Rochester Seed Store.

REYNOLDS & BATEHAM.
Rochester, April 21, 1838.

Drill-Barrows or Planting Machines.

A NEW supply of Robbins' Patent Planting Machines, just received at the Rochester Seed Store.

Also, a number of Merchants' Patent Drill Barrows. [See No. 18, current vol. of the Genesee Farmer.]
May 5. REYNOLDS & BATEHAM.

Farmers' Books.

NOTICES on the Sugar Beet, containing a description of the culture and preservation of the plant; also explanations of the process of extracting its Sugar. Price 25 cts.

A Manual of the art of making and refining sugar from Beets. Price 75 cents.

Cobb's Manual on the Culture of Silk.
Chaptal's Agricultural Chemistry.
The Complete Farmer, by Fessenden.
Fessenden's American Gardener.
A Guide to Orchardists.
Smith's Treatise on the Honey Bee.
A Treatise on Cattle.
Mason's Farriery.
Barnum's American Farriery.
Vols. 1st and 4th, Genesee Farmer, bound.

For sale by D HOYT,
Rochester, May 26, 1838. Bookseller, 6 State st.

Fruit Trees for Sale.

THE subscriber respectfully informs his friends and the public, that he has for sale at his Nursery in Rochester, Monroe county, state of New-York, a large quantity of Fruit Trees, grafted and inoculated with the most approved kinds, now fit for transplanting, which he will sell on the most reasonable terms. SAMUEL MOULSON.

April 15, 1838.

N. B. CASH will be paid for a few thousand two years old APPLE TREES.

Monroe Horticultural Garden & Nurseries, Greece, Monroe County, N. Y.

THIS establishment now comprises over 20 acres, covered compactly with Trees and Plants in the different stages of their growth.

The subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Grape Vines, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, Splendid Pæonies, Double Dahlias, &c. &c.

Also, a large collection of Green-House Plants, of choice and select varieties, in good condition.

Orders respectfully solicited. Trees and Plants, when ordered, are carefully selected and faithfully packed, and if desired, delivered on the Canal, one mile from the Nursery, or at Rochester.

Orders for Mr. Rowe's Nursery received by the publisher of this paper.

Catalogues will be sent to every applicant, gratis, or may be had by calling at the office of the Genesee Farmer.

April 1, 1838. ASA ROWE.